Challenges of Access to Literature and Attitude among Postgraduate Students in Open and Distance Learning: A Case of Egerton University Kenya

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Abstract: *University education involves exposure to wide reading and research among students. This is more critical to postgraduate students, who are required to read much more on their own and prepare for their research and thesis undertakings. Looking at universities in the third world countries, there are challenges of access to current and relevant literature. This is due to lack of modern library facilities as well as high costs of accessing the available ones. The uptake of modern technology in learning and teaching including e-learning and Open Educational Resources are still out of reach by many learners and lecturers alike. Distance learners are also faced with time constraints as they work, and many of them are very far from any access to literature. This study aimed at determining the level of access to literature and related challenges including attitude, among postgraduate students who are in the open and distance learning (ODL) mode at Egerton University. The study revealed the gaps existing in access to literature and their effects on the quality of learning and research outputs of these learners. Further the findings revealed the attitudinal issues that have compounded this problem as learners and academicians transit from traditional sources of literature to the use of modern technology.*

Key Words: access to literature, attitude, open and distance learning, postgraduate students, modern technology, internet, open educational resources.

INTRODUCTION

The last three decades have seen a global expansion of information and communication technologies which have touched even the social lives of people (Yuksel and Kavanoz, 2011). This has in turn changed the orientation of how students learn as well as how teachers teach. In the education sector, drastic changes have been witnessed especially with regard to storage, retrieval, and dissemination of literature and research findings. Thus students are finding it increasingly essential to keep abreast with the emerging technologies so as to access these academic resources. ICT has the potential to enrich learning environments to improve learning and cater for individual differences (Sang *et al.*, 2010). Research has shown that modern students consider the internet a useful tool for their academic work as well as their social activities (Chou *et al.*, 2011). In this regard, students acknowledge the critical role of the internet in providing knowledge, encouraging creativity, and enhancing socialisation.

Technology however comes with its own challenges. Major among these is the attitude of people towards modern technology and the resistance to change from the traditional methods of accessing literature. In the developing countries, a lag in the uptake of technology has complicated this situation even further. While many learners cannot afford to have a personal computer for academic and home use, internet connectivity and general ICT infrastructure is a major challenge to learning institutions including universities. As a result, modern technological initiatives such as e-learning, e-libraries, Open Education Resources, and internet-based learning remain largely inaccessible to these students.

These challenges are not experienced by students alone. The academic staff in many universities in developing countries are as challenged by modern technology as their students. While initiatives by universities and individual academicians to upgrade their computer skills and proficiency in modern technology cannot be downplayed, there is still a major gap in their competencies. Attitude towards modern technology is a major challenge among teachers, and if technology-based teaching and learning is to succeed, they should have a positive attitude. There is a high usage and intention to use technology among those teachers that have a positive attitude (Yuksel and Kavanoz, 2011).

While in the past gender differences were experienced in the use of computers and attitudes towards computers, present studies show that gender differences as such do not exist (Sang *et al*, 2010). While gender differences do not exist in the use of the internet for academic work, there is evidence of gender differences in the use of internet for social activities such as on-line purchasing, games, and dating (Chou *et al*, 2011).

METHODOLOGY

Participants

This study involved 91 registered postgraduate students, in the school-based programme at Egerton University, who were picked randomly from the Faculty of Arts and Social Sciences (41.8%) and Faculty of Education and Community Studies (58.2%). Among them 56 (61.5%) were male, while 35 (38.5%) were female. They were drawn from these faculties as these are the only faculties in the University that have postgraduate school-based programmes. The study was conducted during the residential session in the University.

Instrument and Data Analysis

Data was collected by use of a questionnaire which was developed by the researcher. This instrument was validated and estimated for reliability using the Cronbach Alpha for internal consistency. A coefficient of $\alpha = 0.68$ was obtained. Data was analysed using the Statistical Package for Social Sciences (SPSS) Version 17 for Windows. Relationships were established by use of the Chi-squared test.

RESULTS

Students' Knowledge of Technology-based Sources of Literature

The study sought to find out the level of knowledge among students regarding modern technology-based sources of literature. Specifically the aim was to establish whether these students knew about e-learning and Open Educational Resources.

Table 1: Students' Knowledge of Technology-Based Resources

Internet Resources	Knows	Does Not Know
E- Learning	90.2%	9.9%
Open Educational Resources	44%	56%

The findings shown in Table 1 indicate that 90.2% of postgraduate students knew about the existence of e-learning. However only a minority (44%) were aware of the existence of Open Educational Resources. This is an indication of a deficit in the knowledge of students, since OERs are today a rich source of literature especially for students carrying out research.

Students' Use of Technology-based Sources of Literature

There was a need to find out the extent to which students are using modern technology for literature search. Several of these technology-based sources were identified and this was also compared with students' use of traditional sources of literature. The results are shown in Table 2.

Table 2: Students' Use of Internet Resources

Internet Resources	Has Experience	Has No Experience
E-Learning Platforms	17.6%	82.4%
Open Educational Resources	20.9%	79.1%
E-Journals	38.5%	61.5%

The results highlighted a critical gap in the use of modern technology by postgraduate students in their literature search. Specifically, only 17.6% of students had an experience in using e-learning resources. Another 20.9% of students were the only ones who had used OERs in their studies, and only 38.5% of the postgraduate students had accessed e-journals in their literature search. This was an indication that the majority of postgraduate students at Egerton University were not utilising technology-based literature resources. This in turn shows that students must be having difficulties getting current literature, including relevant research works in their areas of interest and specialisation.

The study sought to compare how students had adapted to the growing world of technology, and how much they had shifted from the traditional trends of literature search to modern technology-based trends. The results are indicated in Table 3.

Table 3: Students' Use of Libraries

Use of Library	Very Often	Often	Rarely	Never
Physical Library in the University	19.8%	37.4%	39.6%	3%
Physical Library Outside the University	3.3%	29.7%	50.5%	16.5%
Electronic Library in the University	Nil	8.8%	35.2%	56%
Electronic Library Outside the University	16.5%	24.2%	25.3%	34.1%

There is a limited use of libraries by students both within and outside the University. This applied to both physical and electronic libraries. The library within the University is the least used by these students, with only 8.8% indicating that they used it often. Use of physical library in the University was rare as 39.6% of students used the library, while 3% never used these libraries. In the same breath, 50.5% of students rarely used physical libraries outside the University, while 16.5% never used these libraries at all. It was reported that 56% of postgraduate students never used the electronic library in the University, while 34.1% never used electronic libraries outside of the University.

The study sought to find out the means that students used to access the internet and technology-based literature sources. This is because infrastructure and availability of computers, as well as connectivity have a direct link to the use of the internet and hence access to literature using modern technology. The findings are as shown in Table 4.

Even though the University has established Internet resource centres in every faculty, postgraduate students hardly use these facilities. Specifically, 37.4% of students rarely use these resource centres, while 51.6% of the students never use them.

Table 4: Students' Use of Technology in Literature Search

Type of Technology	Very Often	Often	Rarely	Never
University's Internet Resource Centres	3.3%	7.7%	37.4%	51.6%
Commercial Cyber Cafe	36.3%	39.6%	16.5%	7.7%
Personal Internet Connected Computer	48.4%	31.9%	8.8%	11%
Internet Enabled Mobile Phone	45.1%	33%	12.1%	9.9%

Postgraduate students seem to favour commercial cyber cafes outside the University for Internet access, with 36.3% using them very often, and 39.6% using them often. These students also have adapted use of personal computers for internet access. It was reported that 48.4% used their personal computers very often, while 31.9% used personal computers often. Use of internet enabled mobile phones seen to have gained prominence in academic endeavours, with 45.1% of students reporting that they use them very often for literature search. Further, 33% of students indicated that they often use their mobile phones for literature access.

Computer skills, which are critical in the use of the internet, have been satisfactorily acquired by postgraduate students at Egerton University. As indicated in Table 5, 48.4% of students rated themselves as having a moderate level of skills, 34.1% rated themselves as having good skills, while 6.6% felt they were excellent in the use of computers. As for the use of internet in the literature search, 36.3% of students rated themselves as moderately skilled, 46.2% rated themselves as well skilled, while 8.8% of the students felt that they had excellent skills.

Table 5: Personal Ability Rating

Skill	Very Poor	Poor	Fair	Good	Excellent
Use of Computer	3.3%	7.7%	48.4%	34.1%	6.6%
Use of Internet in Literature Search	1.1%	7.7%	36.3%	46.2%	8.8%

Modern technology is relatively a new phenomenon in developing countries, and adoption of this new means of learning and access to literature faces attitudinal challenges. Academic staff in the universities should be at the forefront in spearheading these changes and acceptance, as well as encouraging their students to shift from traditional methods to technology-based methods of learning. Universities besides establishing necessary infrastructure need to create awareness among learners about the new opportunities and the benefits that these bring to the learning process.

Table 6: Encouragement on Use of Modern Technology

Level of Encouragement	By Lecturers	By the University
None	Nil	7.7%
Little	5.5%	33%
Fair	39.6%	38.5%
A lot	54.9%	20.9%

As shown in Table 6, majority of the academic staff (54.9%) have given a lot of encouragement to students to use modern technology in their literature search, while 39.6% have fairy encouraged students to do so. Towards this end, the University seems to be doing

a little less with 20.9% of students felt there is a lot of encouragement from the University, and 38.5% felt that the University's encouragement is fair. However, 33% of students felt that they have received little encouragement from the University, while 7.7% felt that they have received no encouragement at all from the University.

Students' Attitude towards Use of Modern Technology in Literature Search

This study sought to establish the attitude of school-based postgraduate students, towards use of modern technology for literature search. This is because attitude can serve as an impetus or an impediment to the acceptance of a new technology. Attitude serves as a motivation or a deterrent for the individual to accept or to resist uptake of new technology initiatives. An attitude inventory was administered to school-based postgraduate students and the results are shown in Table 7.

Table 7: Attitude towards Use of Modern Technology in Literature Search

Attitude	Percentage
Positive	94.5%
Negative	5.5%

Results (Table 7) indicated that 94.5% of postgraduate students at Egerton University had a positive attitude towards use of modern technology for literature search. This was an indication of the readiness to adapt to the changing learning environments and specifically the use of modern technology in literature search. This positive attitude among students is responsible for the rampant use of internet as earlier indicated, but it does not match with the decreased use of University's internet resources and electronic libraries. Further, it does not match the students' knowledge of certain critical technologies such as OERs, which are meant for academic uses.

This study was carried out among students in an African university, where gender differences exist with regard to many social and cultural issues. Thus this study sought to find out whether there existed gender differences in the attitude of school-based postgraduate students towards technology-based literature search. The findings are as shown in Table 8.

Table 8: Relationship between Gender and Attitude

Gender	Positive Attitude	Negative Attitude
Male	94.6%	5.4%
Female	94.3%	5.7%

A Chi-Squared test at $\alpha = 0.05$ yielded $\chi^2_1 = 0.005$, $p = 0.942$, which indicated that there were no gender differences in the attitude of school-based postgraduate students towards technology-based literature search.

The sample for this study was drawn from two faculties at Egerton University which have school-based postgraduate students. It was of importance to find out whether there existed differences in attitude across the two faculties, ant the findings are as shown in Table 9.

A Chi-Square test at $\alpha = 0.05$ yielded $\chi^2_1 = 0.724$, $p = 0.395$, which indicated that there were no significant differences in the attitude of school-based postgraduate students towards technology-based literature search across the two faculties.

Table 9: Relationship between Faculty and Attitude

	Positive Attitude	Negative Attitude
FASS	92.1%	7.9%
FEDCOS	96.2%	3.8%

DISCUSSION

The findings of this study revealed that there is a high level of awareness among students on the existence of internet and e-learning. Most students at Egerton University are well informed about e-learning as a means of learning and literature access. This agrees with Chou *et al., (*2011) who in a study of attitudes among college students in Taiwan found that majority of students appreciated the role of the internet as a source of knowledge and information. Further, it was found that Taiwanese students felt that internet sources can facilitate their school work requirements, creativity, and leisure. However the majority lack knowledge of Open Educational Resources. This does not agree with the global trend since Mikropoulos and Natsis (2011) in their review of various global studies in this area found that virtual learning environments are appropriate for pedagogical use. This is indicative of a gap, where students have not been sensitised fully on the available internet resources and the potential they create for postgraduate student. Postgraduate students are beginners in research and they are generally ready to explore avenues that would lead to more information in their respective areas of research.

The University needs to do more to create more awareness among students as well as give more encouragement to the students to use technology-based resources. There may be some degrees of resistance to change from traditional learning methods to technology-based learning. This situation may lead to lack of acceptance to change or even discouragement as found by Chou (2011). This may be because the adoption of technology may be in conflict with their pedagogical beliefs or it may require a change or a drastic shift from their tradition. However it was commendable to note that academic staff at Egerton University were fairly good and students benefited from this. A study by Yuksel and Kavanoz (2011) had also found that in Turkey, most university's academic staff had a positive attitude towards technology. This is therefore an indicator that academic staff at Egerton were within the global trends.

Besides knowledge, it became clear that the actual use of technology-based resources by school-based postgraduate students was very poor. This trend raises critical questions about how these students use the information in their possession for their benefit. There may be many issues compounding to this situation and this may include a lack of time for these part-time students. There is an indication that technology-based resources within the University are not utilised, and this may be due to the long period that these students are away from the University. The use of commercial internet cafe may be limiting due to financial constraints which is rampant in many developing countries. Since these students are financially laden by University fees and family needs, it may not be a priority to engage in the commercial internet cafe.

Further to the expensive access to the internet in the developing countries, there are infrastructural challenges as well. Internet connectivity is not available in vast rural areas and where it is available it may not be reliable. Power fluctuations may also add to this problem in rural areas. The rural population who comprise the majority of the postgraduate students may then be finding it difficult to use technology-based literature searches due to this accessibility challenge. Accessibility has a direct bearing on the learners' efficacy in the use of computer and internet technology. This in turn has a bearing on the use of this technology

for educational purposes (Papastergiou, 2010). This relationship has a cyclical effect since other studies have found that increased computer efficacy leads to increased computer use too (Wagner *et al.,* 2010).

There has been an increased use of mobile phones in Kenya over the last decade. Almost every Kenyan who is in the high and middle socio-economic classes owns a mobile phone. Although primarily people acquire these phones for ease in communication, their use for internet access is steadily on the rise, with mobile communication service providers offering incentives and competitive rates for internet users. Thus internet-enabled and smart phones are the dream of any user who needs the internet. Furthermore, mobile phone network penetration into rural areas is deeper than other forms of internet connectivity in Kenya. The portability of the mobile phone also makes it convenient and the gadget of choice for most students. This may account for the huge number (78.1%) of students who use mobile phones for literature search. Smart phones are critical tools in education since they are equipped to enable web tools such as search sites, chat, and email services. These facilities are important for a web-based education (Tuncay *et al.*, 2010).

The high numbers of students with a positive attitude towards technology-based resources shows that there has been a positive impact of these technologies among learners. More and more learners and University lecturers are realising the convenience that technology offers in academic pursuits. The decreased use of physical libraries is a pointer to the shift from the traditional methods of literature access towards technology-based methods. Results show that this attitudinal change is across gender and across all faculties in the University. The study revealed that there were no gender differences in the attitude towards the internet as a source of literature. This is similar to findings by Chou *et al.* (2011) who also found a similar trend among Taiwanese college students. Literature seems to qualify that this is the trend globally. The results show that there is a realisation that a modern researcher or student requires good computer skills in order to succeed in this technologically academic environment. This may account for the high number of learners who rated their internet and computer use skills as good or excellent. Furthermore, according to Mikropoulos and Natsis (2011), both teachers and students globally share a positive attitude towards use of virtual environments in educational settings. Positive attitude is a pointer to the people's acceptance of modern technology and this should be improved since acceptance is a clear pointer to actual use of technology. This was established by Turner *et al.* (2010) in a study of a technology acceptance model.

CONCLUSION

School-based postgraduate students at Egerton University are aware of internet-based literature sources and e-learning but are not aware of Open Educational Resources. The students have limited use of these technology based means of literature search in spite of their knowledge and fairly good computer skills. The students prefer to use internet resources outside the University rather than those available in the University. These students have received good encouragement from their lecturers on the use of these technologies but the University needs to do more in sensitising them on the availability and use of these technology-based means of literature access. There is a positive attitude towards modern technology based literature access among school-based postgraduate students at Egerton University. This positive attitude is uniform across gender and the two faculties with school-based postgraduate programmes in the University.

RECOMMENDATIONS

There is need for the University to create more awareness among postgraduate students as to sensitise them on the available technology means of literature access. Further, the university needs to encourage the use of those resources that are within it, among the postgraduate students including electronic libraries and internet resource centres.

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